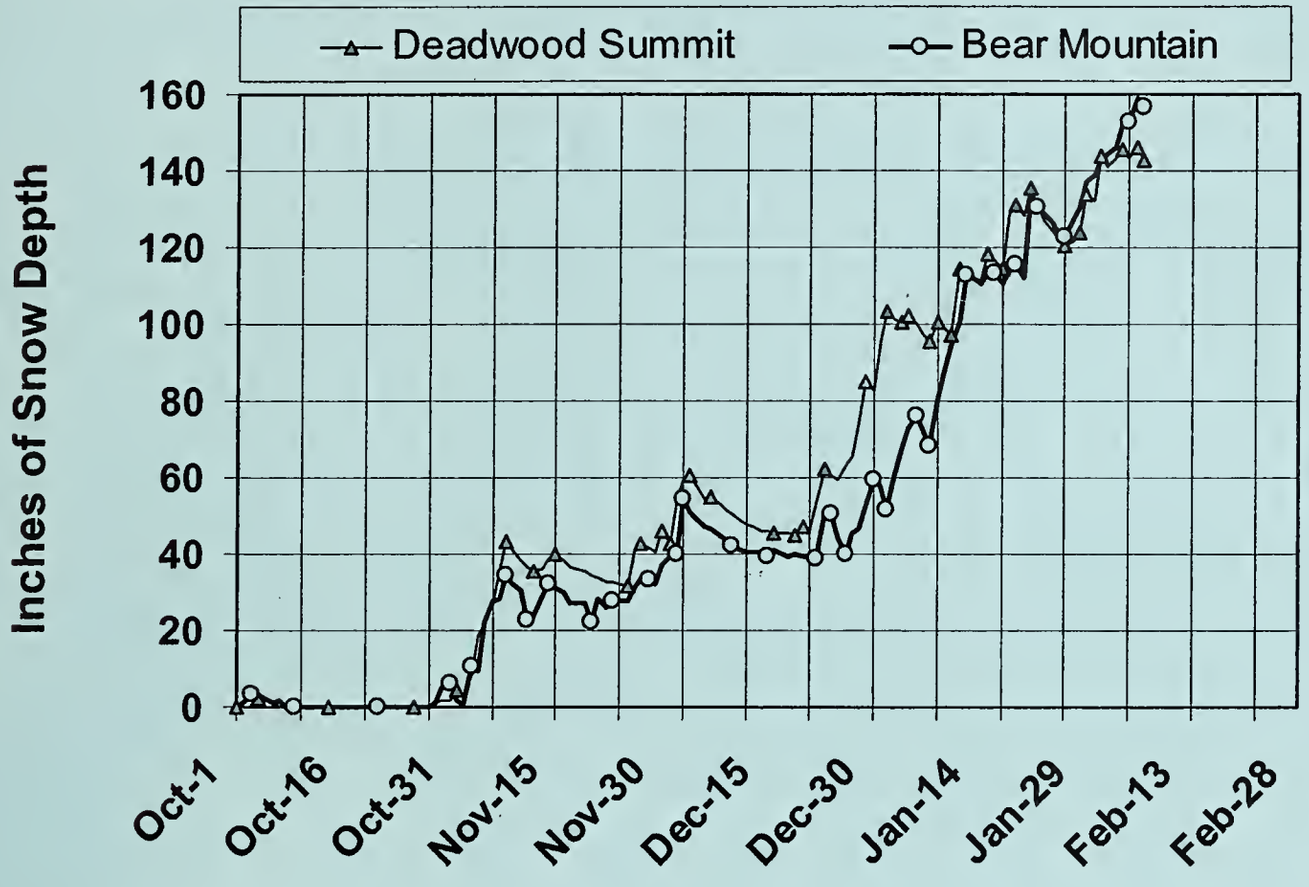
United States Department of Agriculture
Natural Resources Conservation Service

Idaho Water Supply Outlook Report February 1, 2006

Water Year 2006 SNOTEL Snow Depth Comparison



Although snow water content is of great interest to water users who depend on a healthy snowpack for summer water supplies, winter recreationists are often more interested in snow depth. Backcountry skiers and snowmobilers want to know how much powder fell in a recent storm, or if the total snow depth buries the bushes on their favorite slope. Over the past six years, 52 of Idaho's 82 SNOTEL sites have been upgraded with ultrasonic depth sensors which provide near real-time monitoring of snowpack depth. This winter has brought fantastic snow depths to many areas. As of the first week of February, 16 SNOTEL sites have at least 100 inches of snow depth. Bear Mountain SNOTEL, in the Panhandle, leads the pack with 156 inches, and is followed closely by Deadwood Summit SNOTEL, near Cascade, with 143 inches. A number of snow depth products are accessible via the Idaho Snow Survey Recreation webpage found at: http://www.id.nrcs.usda.gov/snow/recreation.

Basin Outlook Reports
and Federal - State - Private Cooperative Snow Surveys

For more water supply and resource management information, or to subscribe to this publication

Contact - - Your local Natural Resources Conservation Service Office
or
Natural Resources Conservation Service
Snow Surveys
9173 West Barnes Drive, Suite C
Boise, Idaho 83709-1574
(208) 378-5740

Internet Web Address
http://www.id.nrcs.usda.gov/snow/

How forecasts are made

Most of the annual streamflow in the western United States originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snow courses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. These forecasts are coordinated between hydrologists in the Natural Resources Conservation Service and the National Weather Service. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences.

Forecasts of any kind, of course, are not perfect. Streamflow forecast uncertainty arises from three primary sources: (1) uncertain knowledge of future weather conditions, (2) uncertainty in the forecasting procedure, and (3) errors in the data. The forecast, therefore, must be interpreted not as a single value but rather as a range of values with specific probabilities of occurrence. The middle of the range is expressed by the 50% exceedance probability forecast, for which there is a 50% chance that the actual flow will be above, and a 50% chance that the actual flow will be below, this value. To describe the expected range around this 50% value, four other forecasts are provided, two smaller values (90% and 70% exceedance probability) and two larger values (30%, and 10% exceedance probability). For example, there is a 90% chance that the actual flow will be more than the 90% exceedance probability forecast. The others can be interpreted similarly.

The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast. Users should take this uncertainty into consideration when making operational decisions by selecting forecasts corresponding to the level of risk they are willing to assume about the amount of water to be expected. If users anticipate receiving a lesser supply of water, or if they wish to increase their chances of having an adequate supply of water for their operations, they may want to base their decisions on the 90% or 70% exceedance probability forecasts, or something in between. On the other hand, if users are concerned about receiving too much water (for example, threat of flooding), they may want to base their decisions on the 30% or 10% exceedance probability forecasts, or something in between. Regardless of the forecast value users choose for operations, they should be prepared to deal with either more or less water. (Users should remember that even if the 90% exceedance probability forecast is used, there is still a 10% chance of receiving less than this amount.) By using the exceedance probability information, users can easily determine the chances of receiving more or less water.

IDAHO WATER SUPPLY OUTLOOK REPORT

February 1, 2006

SUMMARY

The storm track continued to bring abundant moisture into Idaho in January for the third consecutive month. Most water supply parameters are looking encouraging. These include: good soil moisture, average or better snowpacks and projected streamflows, flood control releases are being made from some reservoirs, but read on to see if we are out of the woods yet.

Summary of Idaho's Complex Hydrologic Drought Status

This question and answer discussion is to help water users understand Idaho's current drought status and hydrologic complexities. Drought affects everyone differently and depends upon your water use or water right. Some drought effects may last longer than others and depend upon drought severity and recovery time. Different drought definitions exist and may not apply from one basin to the next. Hopefully, this discussion will help explain drought recovery time and the complex hydrologic differences in Idaho's basins. Thanks to Idaho Department of Water Resources Water District #1 for their assistance in compiling this information.

Q: Is the drought over?
A: That depends of course on who is asking, and where their water supply comes from and where it is replenished.

1) If someone is concerned about dryland grazing, dryland fires or directly affected by soil moisture, then they are directly and quickly impacted by precipitation or the lack thereof, and are usually the first ones to recover when it rains or snows. Above normal precipitation is the first step to recovery providing soil saturation and increase streamflows. To ensure above average or better vegetation growth this year, adequate spring precipitation is still needed. Increasing moisture in Idaho's forests helps decrease forest fire potential and helps trees defend against insect attacks, but there may be a delay in uptake of this moisture from when it falls.

2) If the questioner lives near the river, fishes on the river or is an irrigator dependent on natural flow or runoff he/she is the next group to recover, particularly if flood control releases are being made.

3) If the person asking is primarily concerned about storage water in the reservoir for boating, or recreating they are usually the third group to notice the drought, and the third group to recover. With above average snowpacks and streams forecasted this year, many reservoirs will remain full for a longer period of time this summer.

4) If the question is posed by someone with groundwater, wells or springs that are DISTANT from the river and recharge areas, they may NOT have noticed a decline at the onset of the drought, but may have since deepened their wells during the second or third year of the drought. They also may see a similar delay for water levels to recover, once above normal precipitation returns.

Q: Has the precipitation from last year and this year helped?
A: Yes, the above average precipitation has helped, but some areas of the hydrologic cycle are still recovering. Remember in the winter of 2004-2005 when snowpacks were 50-70% of average across most of Idaho? A very wet May dampened Idaho's drought last year by saturating soils, increasing streams and delaying irrigation demand. However, once the runoff left the basin, most streams returned to below normal levels until the fall rains. This is primarily due to delay in recharging the springs and seeps that keep streams higher during Idaho's dry summer months. Likewise, October precipitation last fall brought an increase in streams but flows again returned to below normal levels in most basins when the rains ceased. It wasn't until December and January when precipitation increased streams and caused some flooding, and most importantly, kept streams above normal levels. These rains helped saturate and prime the soils for when this year's above average snow melts. This is great news for Idaho's water users.

Depending upon the hydrologic resource concern that is being monitored, there may be a delayed response in drought recovery time. Aquifer recovery may take several wet years to recover. Wells in the Big Lost basin are down 20-50 feet since the last wet spell ended in 1999. Human changes in surface water use and ground water pumping may also influence recovery time. During drought recovery, it is important to remember that this drought was not as severe in the western half of state as in central, eastern and southeastern Idaho. Drought impacts vary by basin and often depend upon water use, source and/or storage facilities. For example, the Owyhee basin is in great shape with the reservoir 83% full, flood control releases being made, snowpacks at 135% of average, streamflow forecast at 125-150% of average, and limited groundwater use compared to other basins. With reservoirs and groundwater levels still low in parts of central and eastern Idaho, and these basins recovering from nearly the lowest six-year total streamflow levels for the period of record, it may take two or three wet years in a row to put a bigger dent in the cumulative drought deficit.

With 40% of the winter still to come and more volatile weather observed in recent years, not just in Idaho but across the nation, stay tuned to see how the snow accumulation season ends in April and the runoff season begins. Water users should be "cautiously optimistic" until we see how this season ends, but with above average snowpacks and primed soils, don't be surprised to see an extended period of high streamflows this year but also lingering drought effects in some basins.

SNOWPACK

With more than half the winter behind us, Idaho's snowpack is very encouraging at this point. Highest snowpacks in the state are in the Oakley, Salmon Falls, and Bruneau basins around 150% to 160% of average and have already exceeded their seasonal peaks that usually occur in early April. The lowest snowpacks in the state are near average in the Panhandle and Clearwater basins. In central Idaho, some lower elevation snow sites have already exceeded their normal seasonal peaks this year. Mid-elevation sites are two months ahead of schedule and approaching their seasonal peaks while higher elevation, which produce the majority of runoff, are only a month ahead of schedule and still below their seasonal peaks. With Idaho's snowpacks currently at 100-160% of average, this means that without any more precipitation between now and April 1, Idaho's snowpack would range from 65% of average in northern Idaho to 105% in southern Idaho on April 1.

PRECIPITATION

January brought above average precipitation across the state with the highest amounts in the basins south of Snake River at 191% of average. The least amounts were in the Salmon, Wood and Lost, and Upper Snake basins at about 145% of average. January precipitation in central and southern Idaho made it the third consecutive month with above average precipitation. The last time Deadwood Summit SNOTEL is central Idaho had four consecutive winter months with above average precipitation was the winter of 1998-1999. We'll see if the trend continues in February. Precipitation since the water year started October 1 ranges from a low of 106% of average in the Panhandle Region to 155% in the basins south of the Snake River.

RESERVOIRS

Reservoir storage is looking more promising with several making flood control releases to maintain storage space for the spring runoff. Releases are being made from Boise, Owyhee, Little Wood and Palisades reservoirs. American Falls Reservoir is storing average amounts at 68% of capacity and is expected to fill based on upon normal irrigation start dates and demands. With a near average snowpack and streamflow forecasts, Dworshak Reservoir is storing above average amounts at 115% of average, 72% full. Reservoirs with the lowest storage are Blackfoot 40% of average, Bear Lake 44%, Magic 67% and Salmon Falls 76%.

Note: NRCS reports reservoir information in terms of usable volumes, which includes both active, inactive and in some cases, dead storage. Other operators may report reservoir contents in different terms. For additional information, see the reservoir definitions in this report...

STREAMFLOW

Streamflow forecasts increased significantly from a month ago and are similar to our January mid-month forecasts. The lowest forecasts are in northern Idaho at 95-110% of average; these include the Panhandle streams and Dworshak Reservoir inflow. The highest forecasts are 165% of average for Camas Creek near Blaine. The Middle Fork Salmon, Boise, Big and Little Wood rivers, Salmon Falls Creek and Owyhee River headwaters are all forecast at 140-150% of average. The Bear River is forecast at 135% of average while the Snake River near Heise is forecast at 117% and the Salmon River at White Bird at 122%. Surface water supplies should be adequate for Idaho's numerous water users unless the weather pattern changes drastically to the dry side.

RECREATION

January brought deep snow and more powder for Idaho's winter recreationists. Many snow measuring stations are reporting over 100 inches of snow and the best snowpacks since 1997. Good snow also means good boating later this spring and summer. Depending on how the rest of winter goes, streams should have an extended high water season and the above average snowpacks will help to keep baseflows higher into the summer months. Be ready: Idaho's southern desert streams will be flowing this spring along with the central and northern Idaho streams. Hopefully they won't be peaking at the same time. This year could prove to be one of the better boating seasons we've seen in a while.

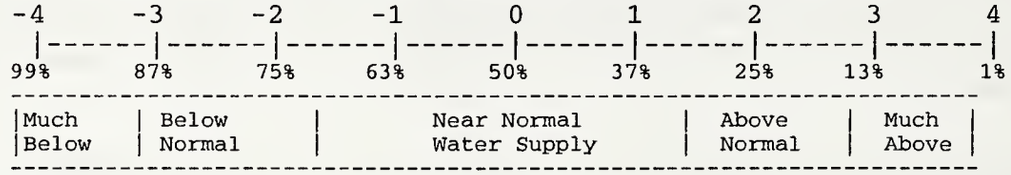
IDAHO SURFACE WATER SUPPLY INDEX (SWSI) *As of February 1, 2006*

The Surface Water Supply Index (SWSI) is a predictive indicator of surface water availability within a watershed for the spring and summer water use season. The index is calculated by combining pre-runoff reservoir storage (carryover) with forecasts of spring and summer streamflow. SWSI values are scaled from +4.0 (abundant supply) to -4.0 (extremely dry), with a value of zero indicating a median water supply as compared to historical occurrences. The SWSI analysis period is from 1971 to present.

SWSI values provide a more comprehensive outlook of water availability by combining streamflow forecasts and reservoir storage where appropriate. The SWSI index allows comparison of water availability between basins for drought or flood severity analysis. Threshold SWSI values have been determined for some basins to indicate the potential for agricultural irrigation water shortages.

BASIN or REGION	*SWSI Value*	*Most Recent Year With Similar SWSI Value*	*Agricultural Water Supply Shortage May Occur When SWSI is Less Than*
PANHANDLE	-0.3	1993	NA
CLEARWATER	1.7	1999	NA
SALMON	2.0	1999	NA
WEISER	2.0	1996	NA
PAYETTE	2.7	1999	NA
BOISE	2.4	1996	-2.1
BIG WOOD	1.7	1995	-0.5
LITTLE WOOD	2.4	1998	-2.0
BIG LOST	2.0	1999	-0.5
LITTLE LOST	0.3	1996	0.0
HENRYS FORK	0.7	1993	-3.3
SNAKE (HEISE)	1.1	1998	-1.8
OAKLEY	1.5	1999	-1.0
SALMON FALLS	1.7	1998	-1.0
BRUNEAU	2.9	1995	NA
BEAR RIVER	-1.8	1990	-2.9

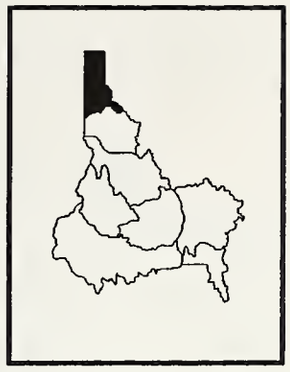
SWSI SCALE, PERCENT CHANCE OF EXCEEDANCE, AND INTERPRETATION

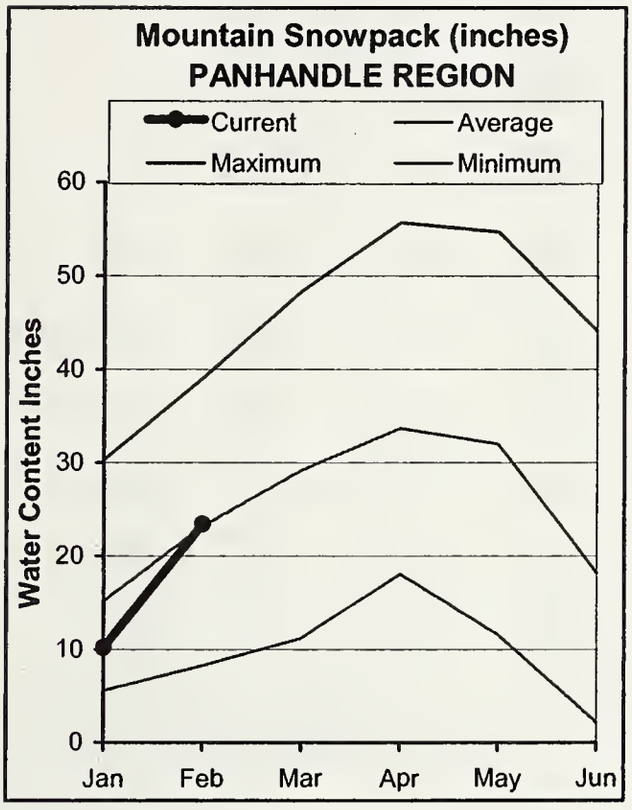


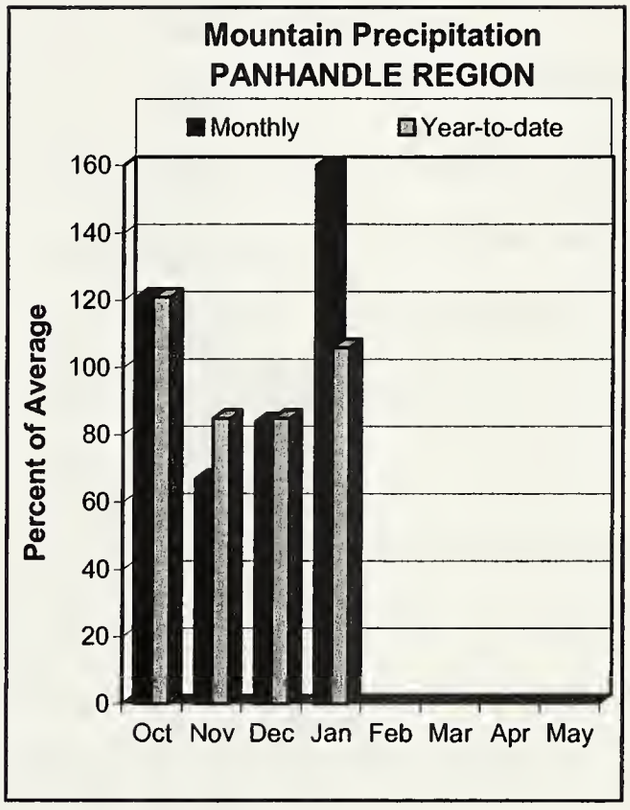
NA = Not Applicable

Note: The Percent Chance of Exceedance is an indicator of how often a range of SWSI values might be expected to occur. Each SWSI unit represents about 12% of the historical occurrences. As an example of interpreting the above scale, the SWSI can be expected to be greater than -3.0, 87% of the time and less than -3.0, 13% of the time. Half the time, the SWSI will be below and half the time above a value of zero. The interval between -1.5 and +1.5 described as "Near Normal Water Supply," represents three SWSI units and would be expected to occur about one-third (36%) of the time.

PANHANDLE REGION
FEBRUARY 1, 2006







WATER SUPPLY OUTLOOK

What a difference a year makes. Remember last year when Fourth of July Summit snow course had no snow on February 1 and it was the first time no snow was reported at the site on a February 1 survey since records started in 1960. This year Fourth of July Summit is 120% of average with 29 inches of depth and 8.5 inches of snow water, average is 7.1 inches. Similarly, Moscow Mountain at 92% of average has almost four times as much snow water as last year. Many other sites in the Panhandle Region follow this trend. The Coeur d'Alene snowpack is the lowest in the state at 95% of average, followed closely by the St. Joe basin at 97%. Elsewhere in the region the snowpack is average or better with Pend Oreille basin at 107% of average. January precipitation was 160% of average. Amounts ranged from 7 inches at lower elevation SNOTEL sites to nearly 23 inches at Bear Mountain SNOTEL site, average amounts are 5 to 15 inches. Water year to date amounts are the lowest in the state at 106% of average. Bear Mountain has the deepest and highest snow water content in the state at 145 inches deep and 44 inches of snow water, 111% of average, and barely exceeds Deadwood Summit SNOTEL site in central Idaho which has 141 inches on the ground, 42 inches of water, and is 146% of average. Storage in the lakes and reservoirs is above average. Streamflow forecasts increased from last month and now range from 95-107% of average. With less than half the winter to go there is still room for improvement to ensure adequate water supplies.

PANHANDLE REGION

Streamflow Forecasts - February 1, 2006

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
KOOTENAI at Leonia (1,2)	APR-JUL	5800	6650	7040	100	7430	8280	7040
	APR-SEP	7920	8060	8120	100	8180	8320	8120
MOYIE RIVER at Eastport	APR-JUL	335	370	390	96	410	445	405
	APR-SEP	350	380	405	96	430	460	420
SMITH CREEK	APR-JUL	111	126	137	111	148	163	123
	APR-SEP	116	133	145	112	157	174	129
BOUNDARY CREEK	APR-JUL	104	119	129	105	139	154	123
	APR-SEP	110	125	135	105	145	160	129
CLARK FK at Whitehorse Rpds (1,2)	APR-JUL	8460	10830	11900	105	12970	15340	11300
	APR-SEP	9320	11920	13100	105	14280	16880	12500
PEND OREILLE Lake Inflow (2)	APR-JUL	10550	12310	13500	106	14690	16450	12700
	APR-SEP	11570	13490	14800	107	16110	18030	13900
PRIEST near Priest River (1,2)	APR-JUL	710	820	870	107	920	1030	815
	APR-SEP	640	840	930	107	1020	1225	870
NF COEUR D'ALENE RIVER AT ENAVILLE	APR-JUL	510	625	700	95	775	890	740
	APR-SEP	545	660	740	95	820	935	780
ST. JOE at Calder	APR-JUL	875	1010	1100	97	1190	1320	1140
	APR-SEP	930	1070	1160	97	1250	1390	1200
SPOKANE near Post Falls (2)	APR-JUL	1880	2220	2460	97	2700	3040	2550
	APR-SEP	1950	2310	2550	96	2790	3150	2650
SPOKANE at Long Lake (2)	APR-JUL	2080	2480	2750	97	3020	3420	2850
	APR-SEP	2260	2680	2960	96	3240	3660	3070

PANHANDLE REGION

Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
HUNGRY HORSE	3451.0	3000.0	3070.0	2214.7
FLATHEAD LAKE	1791.0	1033.0	1168.0	971.2
NOXON RAPIDS	335.0	323.0	319.9	310.9
PEND OREILLE	1561.3	809.2	903.0	749.3
COEUR D'ALENE	238.5	137.3	154.3	115.6
PRIEST LAKE	119.3	60.8	59.9	55.5

PANHANDLE REGION

Watershed Snowpack Analysis - February 1, 2006

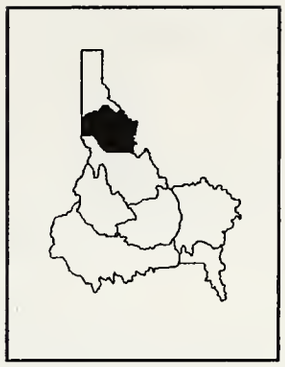
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Kootenai ab Bonners Ferry	18	150	98
Moyie River	6	146	103
Priest River	4	209	121
Pend Oreille River	69	190	107
Rathdrum Creek	4	459	136
Hayden Lake	0	0	0
Coeur d'Alene River	6	252	95
St. Joe River	4	197	97
Spokane River	12	245	105
Palouse River	1	405	92

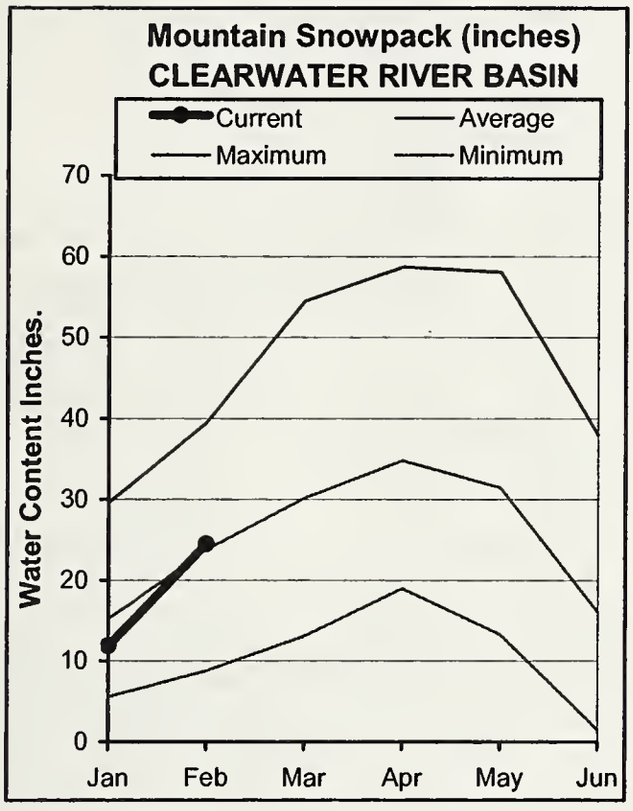
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

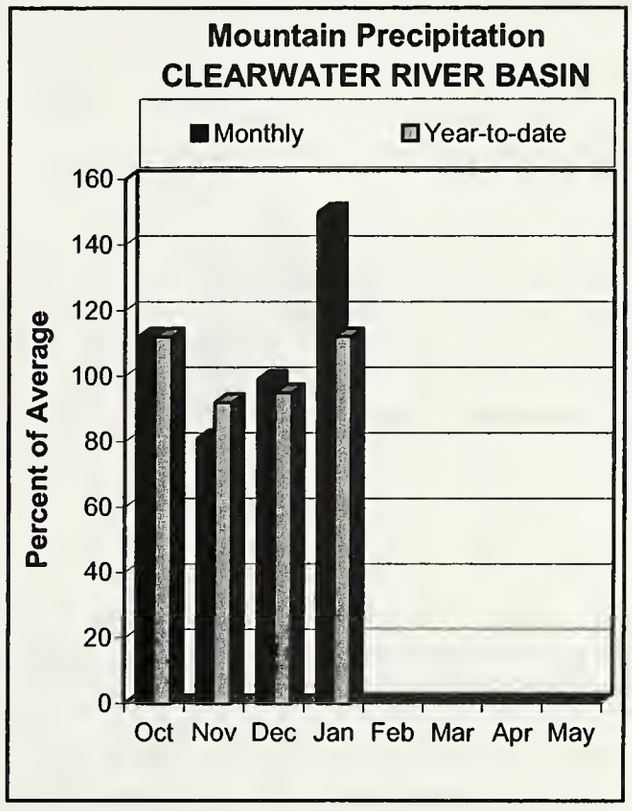
The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management

CLEARWATER RIVER BASIN
FEBRUARY 1, 2006







WATER SUPPLY OUTLOOK

January precipitation was 152% of average and boosted the total precipitation for the water year to 112% of average. This January brought two or three times the precipitation of last January to most SNOTEL sites. Snowpacks in these basins are right at average and two-thirds of the average seasonal annual peak that occurs in early April. Dworshak Reservoir is 72% full and 115% of average for this time of year. Flows on the Clearwater River at Orofino remained above the 49-year median values since late December and this spring's streamflow forecast increased from last month's forecast. All major rivers are forecast for 103-109% of average. As we move past the mid-point of winter all variables show average to slightly above average water supplies for the Clearwater Basin unless the future brings drier weather.

CLEARWATER RIVER BASIN

Streamflow Forecasts - February 1, 2006

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
SELWAY near Lowell	APR-JUL	1930	2120	2240	109	2360	2550	2060
	APR-SEP	2030	2230	2360	109	2490	2690	2170
LOCHSA near Lowell	APR-JUL	1400	1530	1620	106	1710	1840	1530
	APR-SEP	1470	1610	1700	106	1790	1930	1610
DWORSHAK RESV INFLOW (1,2)	APR-JUL	1590	2370	2730	103	3090	3870	2640
	APR-SEP	1730	2510	2870	103	3230	4010	2800
CLEARWATER at Orofino (1)	APR-JUL	3230	4440	4990	107	5540	6750	4650
	APR-SEP	3500	4710	5260	107	5810	7020	4900
CLEARWATER at Spalding (1,2)	APR-JUL	5010	7060	7990	108	8920	10970	7430
	APR-SEP	5470	7520	8450	108	9380	11430	7850

CLEARWATER RIVER BASIN

Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
DWORSHAK	3468.0	2504.6	2752.9	2170.7

CLEARWATER RIVER BASIN

Watershed Snowpack Analysis - February 1, 2006

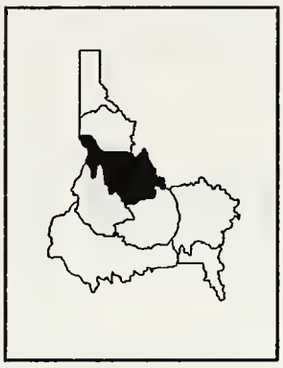
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
North Fork Clearwater	9	188	101
Lochsa River	4	204	99
Selway River	5	200	109
Clearwater Basin Total	18	194	101

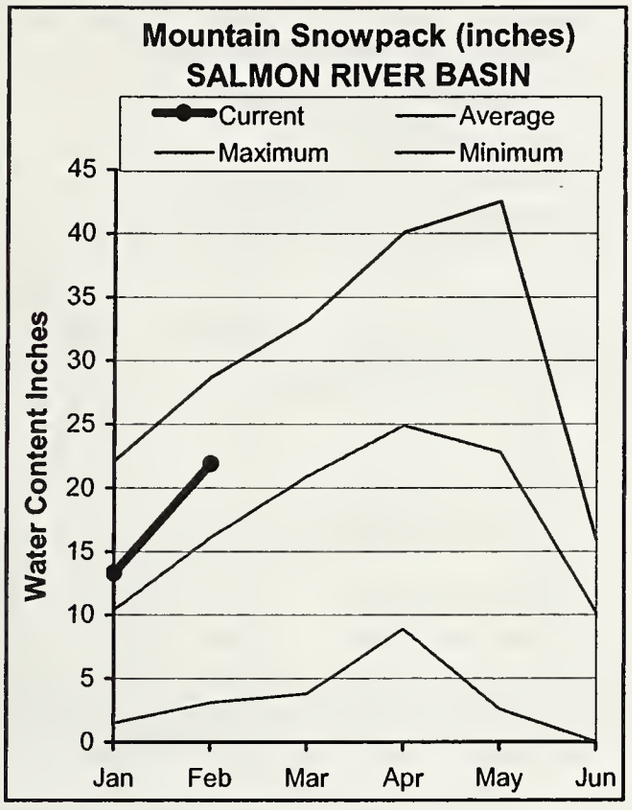
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

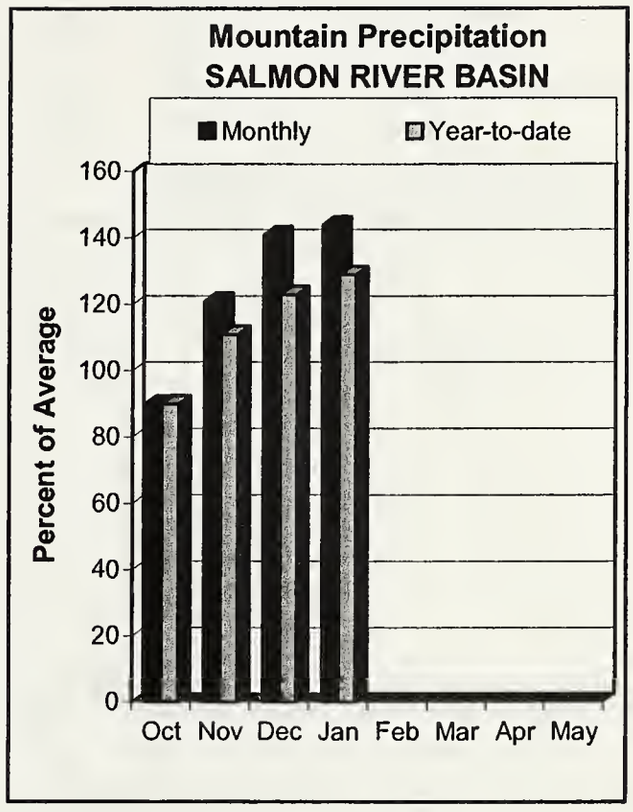
The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

SALMON RIVER BASIN
FEBRUARY 1, 2006







WATER SUPPLY OUTLOOK

January precipitation in central Idaho was above average for the third month in a row at 144% of average. Deadwood Summit has had three consecutive months with above average winter precipitation. This has not happened since the winter of 1998-1999. Water year to date precipitation is 129% of average. Snowpacks are well above average and Deadwood Summit SNOTEL site is chasing Bear Mountain SNOTEL from northern Idaho for the deepest and highest snow water content. Bear Mountain has 145 inches of snow on the ground and 44 inches of snow water, 111% of average. Deadwood Summit SNOTEL site is 146% of average with 42 inches of water and 141 inches on the ground. Go Central Idaho! The lowest snowpacks in the Salmon basin tributaries remain in the Lemhi basin at 113% of average. The snowpack in the Salmon basin above Salmon and Little Salmon basins is 133% of average while the Middle Fork and South Fork Salmon basin is 140-145%. Overall, the Salmon basin snowpack is 129% of average, twice last year and best since 1997. With the abundant January precipitation, streamflow forecasts increased and now call for 144% of average for the Middle Fork Salmon River, 131% for the Salmon River above Salmon and 105% for the Lemhi River. The Salmon River at White Bird is forecast at 122% of average, similar to 1999. Water supplies are looking promising with less that half the winter to go and the snowpack at 80% of its seasonal peak. Get those boats ready and river running permits in hand; there should be an extended period of high flows unless precipitation is well below average the rest of winter.

SALMON RIVER BASIN
Streamflow Forecasts - February 1, 2006

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
SALMON at Salmon (1)	APR-JUL	745	1000	1120	131	1240	1500	855
	APR-SEP	925	1180	1300	130	1420	1680	1000
Lemhi River nr Lemhi	APR-JUL	55	75	90	105	107	134	86
	APR-SEP	68	92	110	105	130	162	105
MF Salmon at MF Lodge	APR-JUL	831	1004	1130	144	1264	1475	785
	APR-SEP	923	1112	1250	143	1396	1626	875
SALMON at White Bird (1)	APR-JUL	5070	6490	7130	122	7770	9190	5850
	APR-SEP	5840	7260	7900	122	8540	9960	6480

SALMON RIVER BASIN
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg

SALMON RIVER BASIN
Watershed Snowpack Analysis - February 1, 2006

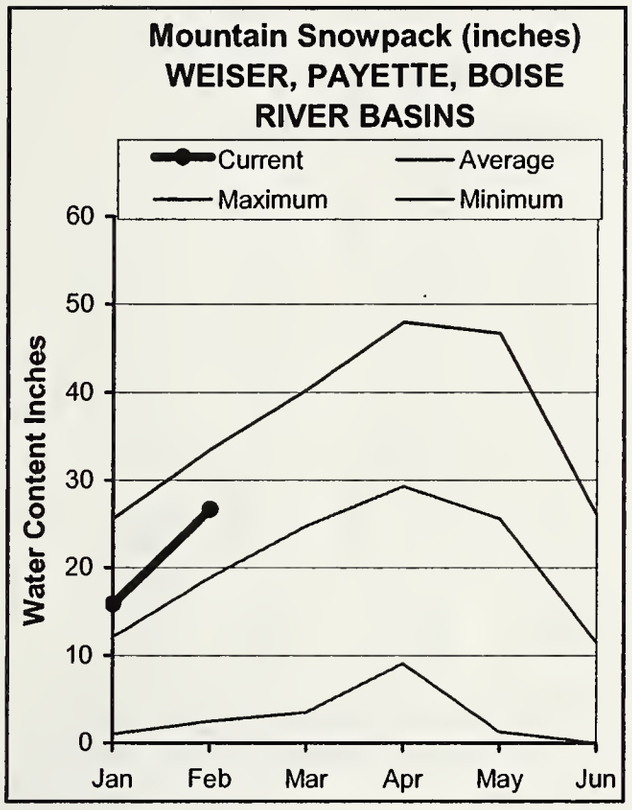
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Salmon River ab Salmon	9	202	133
Lemhi River	6	157	113
Middle Fork Salmon River	3	239	139
South Fork Salmon River	3	245	143
Little Salmon River	4	213	134
Salmon Basin Total	24	202	129

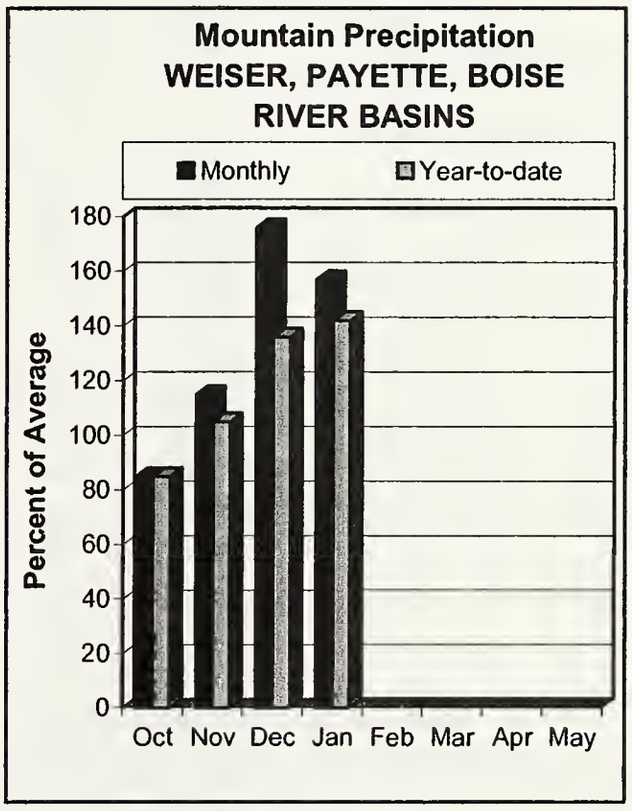
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

WEISER, PAYETTE, BOISE RIVER BASINS FEBRUARY 1, 2006





WATER SUPPLY OUTLOOK

Moisture laden storms continued to roll into the west-central mountains. January precipitation was 157% overall with individual SNOTEL sites ranging from 130% to over 200% of average for the month. Cumulative precipitation amounts since October 1 are already 80-85% of the amounts that fell all of last water year. Colder January mountain temperatures kept precipitation falling as snow in the high country and warmer valley temperatures kept it falling as rain in Boise. Lower elevation snow sites have already exceeded their seasonal peaks this year. Mid-elevation sites are two months ahead of schedule and approaching their seasonal peaks while higher elevation which produce the majority of runoff are only a month ahead of schedule and still below their seasonal peaks. Many higher elevation sites are exceeding 100 inches of snow depth with Deadwood Summit at 141 inches. Current snowpacks are 132-147% of average in the Weiser Payette and Boise basins. For the first time in several years, flood control releases are being made in the Boise reservoir system to maintain room for this spring's snow melt. The Boise reservoir system is 95% of average, 55% of capacity, while the Payette system is 106% of average, 67% of capacity. Streamflow forecasts bumped up a notch from last month due to the above average January precipitation and now call for 143% of average for the Boise River, 135% for the Payette River near Horseshoe Bend and 137% for the Weiser River. Water supplies will be adequate in these west-central basins even with 40% of the winter still to come, as the snowpack is at 90% of its normal seasonal peak.

WEISER, PAYETTE, BOISE RIVER BASINS
Streamflow Forecasts - February 1, 2006

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
WEISER near Weiser (1)	APR-SEP	355	505	575	137	645	795	420
SF PAYETTE at Lowman	APR-JUL	465	525	565	128	605	665	440
	APR-SEP	520	585	630	127	675	740	495
DEADWOOD RESERVOIR Inflow (1,2)	APR-JUL	138	165	177	132	189	216	134
	APR-SEP	149	176	188	132	200	229	142
LAKE FORK PAYETTE near McCall	APR-JUL	96	105	111	131	117	126	85
	APR-SEP	99	109	115	129	121	131	89
NF PAYETTE at Cascade (1,2)	APR-JUL	500	615	665	136	715	830	490
	APR-SEP	555	670	720	136	770	885	530
NF PAYETTE nr Banks (2)	APR-JUL	710	810	880	136	950	1050	645
	APR-SEP	765	875	950	138	1025	1140	690
PAYETTE nr Horseshoe Bend (1,2)	APR-JUL	1710	2030	2180	135	2330	2650	1610
	APR-SEP	1810	2190	2370	135	2550	2930	1750
BOISE near Twin Springs (1)	APR-JUL	700	815	865	136	915	1030	635
	APR-SEP	750	880	940	136	1000	1135	690
SF BOISE at Anderson Ranch Dam (1,2)	APR-JUL	660	745	780	144	815	900	540
	APR-SEP	640	780	840	145	900	1040	580
MORES CREEK near Arrowrock Dam	APR-JUL	130	154	171	131	188	212	131
	APR-SEP	135	160	177	129	194	219	137
BOISE near Boise (1,2)	APR-JUN	1440	1680	1790	142	1900	2140	1260
	APR-JUL	1530	1870	2020	143	2170	2510	1410
	APR-SEP	1700	2040	2190	143	2340	2680	1530

WEISER, PAYETTE, BOISE RIVER BASINS
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
MANN CREEK	11.1	7.7	2.1	4.3
CASCADE	693.2	494.7	470.4	448.4
DEADWOOD	161.9	74.5	74.0	86.3
ANDERSON RANCH	450.2	239.5	213.6	283.6
ARROWROCK	272.2	231.0	121.3	201.1
LUCKY PEAK	293.2	88.3	85.1	106.6
LAKE LOWELL (DEER FLAT)	165.2	86.6	112.2	101.7

WEISER, PAYETTE, BOISE RIVER BASINS
Watershed Snowpack Analysis - February 1, 2006

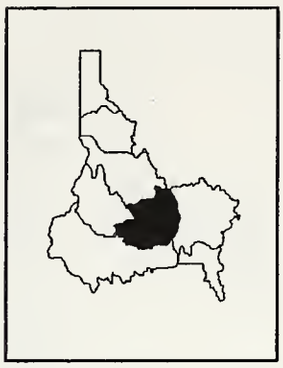
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Mann Creek	1	226	163
Weiser River	3	210	144
North Fork Payette	8	221	132
South Fork Payette	5	245	145
Payette Basin Total	14	229	137
Middle & North Fork Boise	5	251	147
South Fork Boise River	9	205	147
Mores Creek	5	255	136
Boise Basin Total	16	224	142
Canyon Creek	2	205	169

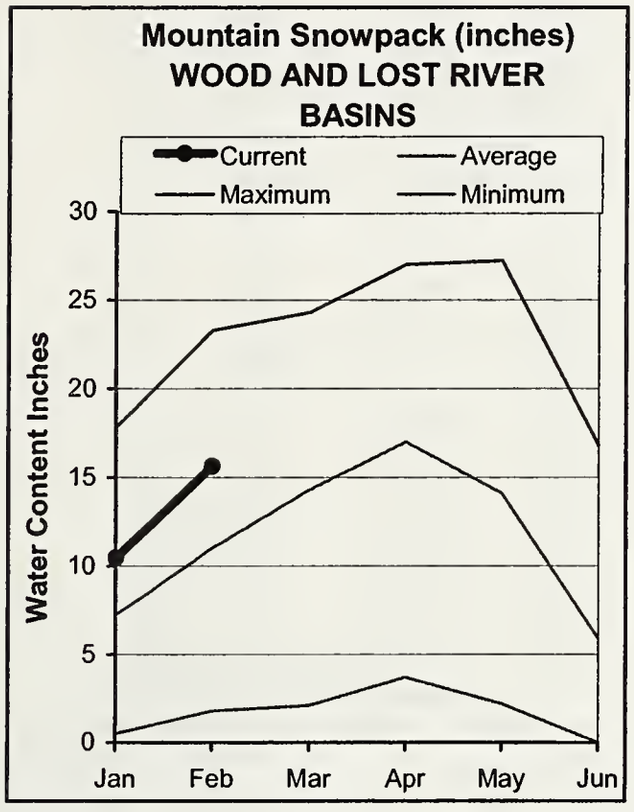
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

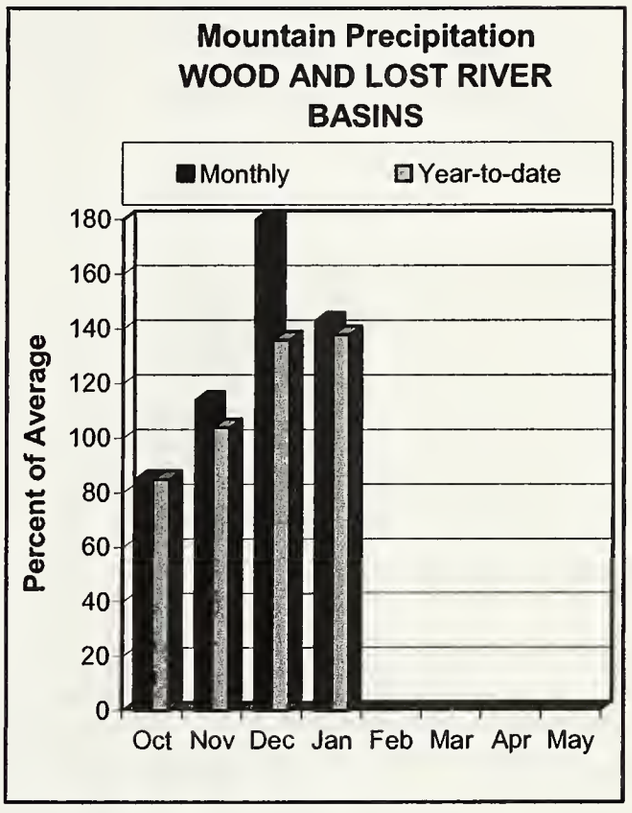
The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

WOOD and LOST RIVER BASINS
FEBRUARY 1, 2006







WATER SUPPLY OUTLOOK

January storms pushed into central Idaho basins bringing 130-165% of average precipitation to nearly all SNOTEL sites in this region. Water year to date precipitation is 138% of average overall and is higher in the Big Lost and Wood basins and lower in the Little Lost and Birch basins. Snowpack percentages mirror the precipitation amounts with Big Wood and Little Wood about 150% of average, best since 1997. Big Lost basin is 140% of average, Little Lost is 112%, and Birch - Medicine Lodge basins are 106%. Camas–Beaver Creek basins are 133% of average with Kilgore snow site, northwest of Dubois, at 168% of average, 5th highest February 1 value since record starts in 1937. Snow depth is 48 inches and snow surveyors report the barbed wire fences are covered and you can just walk right over them. Flood control releases are being made from Little Wood Reservoir, which is 64% full, with the streamflow forecast at 143% of average. Magic Reservoir is 30% full and inflow forecast is for 149% of average for April-September, best since 1997. Mackay Reservoir is 65% full and forecast at 125% of average. Groundwater levels are still low in this basin due to the six year drought but surface water supplies should be similar to 1999 which was the end of the wet years.

WOOD AND LOST RIVER BASINS
Streamflow Forecasts - February 1, 2006

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
BIG WOOD at Hailey (1)	APR-JUL	223	304	345	135	389	494	255
	APR-SEP	255	345	390	135	438	554	290
BIG WOOD ab Magic Reservoir	APR-JUL	149	215	270	142	333	443	190
	APR-SEP	185	250	295	145	340	405	204
CAMAS CREEK near Blaine	APR-JUL	104	139	165	165	194	240	100
	APR-SEP	108	143	170	168	199	246	101
BIG WOOD below Magic Dam (2)	APR-JUL	280	370	435	150	500	590	290
	APR-SEP	295	390	455	149	520	615	305
LITTLE WOOD R ab High Five Ck	MAR-JUL	82	105	122	144	141	171	85
	MAR-SEP	89	113	132	144	152	184	92
	APR-JUL	73	95	112	144	130	159	78
	APR-SEP	80	104	122	144	141	172	85
LITTLE WOOD near Carey (2)	MAR-JUL	103	123	137	143	151	171	96
	MAR-SEP	112	134	149	143	164	186	104
	APR-JUL	90	110	124	143	138	158	87
	APR-SEP	97	119	134	143	149	171	94
BIG LOST at Howell Ranch	APR-JUL	133	179	210	121	240	285	173
	APR-SEP	152	204	240	122	275	330	197
BIG LOST bl Mackay Reservoir	APR-JUL	113	150	176	125	202	237	141
	APR-SEP	138	184	215	125	244	294	172
LITTLE LOST bl Wet Creek	APR-JUL	22	28	32	103	36	42	31
	APR-SEP	28	35	40	103	45	52	39

WOOD AND LOST RIVER BASINS
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
MAGIC	191.5	56.8	23.0	85.0
LITTLE WOOD	30.0	19.2	13.0	16.3
MACKAY	44.4	28.7	19.7	27.7

WOOD AND LOST RIVER BASINS
Watershed Snowpack Analysis - February 1, 2006

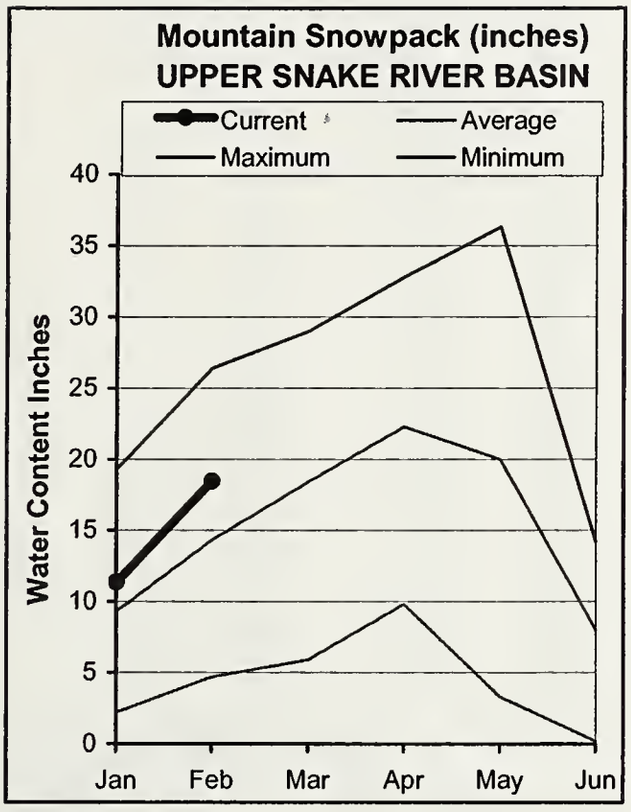
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Big Wood ab Hailey	8	184	144
Camas Creek	5	199	158
Big Wood Basin Total	13	188	148
Fish Creek	3	147	159
Little Wood River	8	156	150
Big Lost River	6	159	140
Little Lost River	3	144	112
Birch-Medicine Lodge Cree	2	147	106
Camas-Beaver Creeks	4	117	133

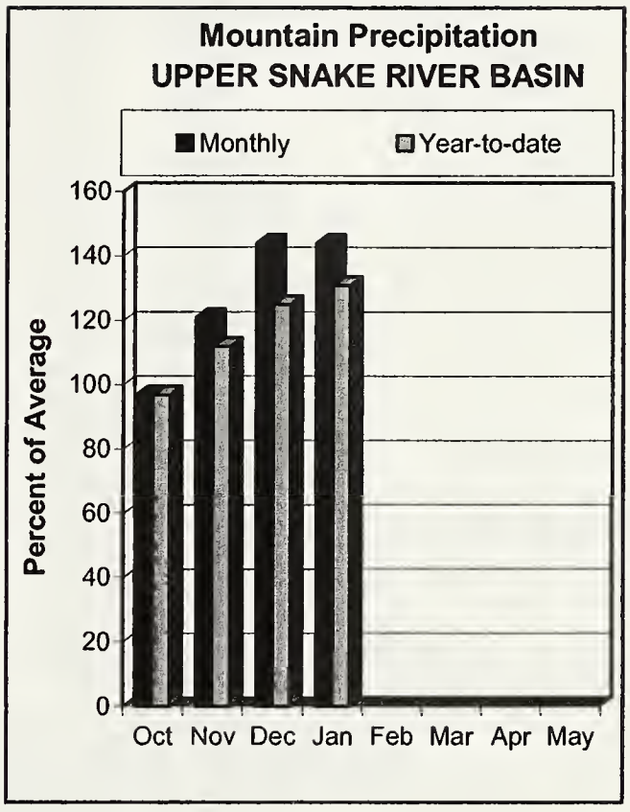
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

UPPER SNAKE BASINS
FEBRUARY 1, 2006





WATER SUPPLY OUTLOOK

January precipitation ranged from 130% of average for Snake basin above Palisades Reservoir to 159% in the lower elevation of Willow, Blackfoot and Portneuf basins. The Henrys Fork and Teton basins received 147% of average precipitation in January. Overall, water year to date precipitation is 131% of average. Snowpacks above American Falls Reservoir are 130% of average overall, and range from 120-140% for most basins. Reservoir flood control releases are being made from Palisades Reservoir which is 61% full and will fill this year. The Snake River near Heise is forecast at 117% of average. Based on the Surface Water Supply Index, surface water supplies should be adequate and the best since 1999. Jackson Lake is 48% full, 82% of average. American Falls Reservoir is 68% full and should fill based on normal irrigation demand and start dates. Blackfoot Reservoir remains low at only 25% full, 40% of average; inflow is forecast at 121% of average. Surface water supplies should be adequate; however, springs and ground water levels have a delayed response to surface precipitation and streamflow, and will take several above average precipitation years to put a bigger dent in the aquifer deficit.

UPPER SNAKE RIVER BASIN
Streamflow Forecasts - February 1, 2006

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
HENRYS FORK near Ashton (2)	APR-JUL	535	590	625	110	660	715	570
	APR-SEP	735	795	840	110	885	945	765
HENRYS FORK near Rexburg (2)	APR-JUL	1480	1650	1760	113	1870	2040	1560
	APR-SEP	1950	2130	2260	112	2390	2570	2010
FALLS RIVER nr Ashton (2)	APR-JUL	360	405	435	115	465	510	380
	APR-SEP	430	480	515	114	550	600	450
TETON RIVER NEAR DRIGGS	APR-JUL	142	171	190	115	209	240	165
	APR-SEP	181	216	240	114	265	300	210
TETON near St. Anthony	APR-JUL	360	420	460	114	500	560	405
	APR-SEP	430	500	545	114	590	660	480
SNAKE at Flagg Ranch	APR-JUL	495	555	595	127	635	695	470
	APR-SEP	540	605	650	126	695	760	515
SNAKE nr Moran (1,2)	APR-JUL	805	920	975	120	1025	1145	815
	APR-SEP	890	1020	1080	119	1140	1270	905
PACIFIC CREEK at Moran	APR-JUL	192	210	225	132	240	260	171
	APR-SEP	200	220	235	132	250	270	178
SNAKE ab resv nr Alpine (1,2)	APR-JUL	2280	2630	2780	117	2930	3280	2370
	APR-SEP	2610	2990	3170	116	3350	3730	2730
GREYS above Palisades	APR-JUL	335	385	415	122	445	495	340
	APR-SEP	395	445	480	122	515	565	395
SALT near Etna	APR-JUL	315	370	410	121	450	505	340
	APR-SEP	390	460	505	120	550	620	420
SNAKE nr Irwin (1,2)	APR-JUL	3150	3680	3920	118	4160	4690	3330
	APR-SEP	3680	4280	4550	118	4820	5420	3870
SNAKE near Heise (2)	APR-JUL	3510	3900	4170	117	4440	4830	3560
	APR-SEP	4120	4570	4870	117	5170	5620	4160
WILLOW CREEK nr Ririe	MAR-JUL	70	90	105	119	121	147	88
BLACKFOOT RESV INFLOW	APR-JUN	97	125	145	121	165	194	120
SNAKE nr Blackfoot (1,2)	APR-JUL	4570	5260	5580	121	5900	6590	4600
	APR-SEP	5810	6500	6820	121	7140	7830	5620
PORTNEUF at Topaz	MAR-JUL	82	93	100	112	107	118	89
	MAR-SEP	101	113	122	112	131	143	109
AMERICAN FALLS RESV INFLOW (1,2)	APR-JUL	2680	3640	4070	126	4500	5460	3240
	APR-SEP	3020	3980	4410	126	4840	5800	3510

UPPER SNAKE RIVER BASIN
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
HENRYS LAKE	90.4	86.5	66.1	83.2
ISLAND PARK	135.2	92.5	79.6	102.2
GRASSY LAKE	15.2	8.1	8.7	11.8
JACKSON LAKE	847.0	403.4	133.5	490.1
PALISADES	1400.0	858.5	571.5	1040.3
RIRIE	80.5	40.8	31.8	35.8
BLACKFOOT	348.7	87.8	34.1	220.1
AMERICAN FALLS	1672.6	1139.1	978.7	1125.4

UPPER SNAKE RIVER BASIN
Watershed Snowpack Analysis - February 1, 2006

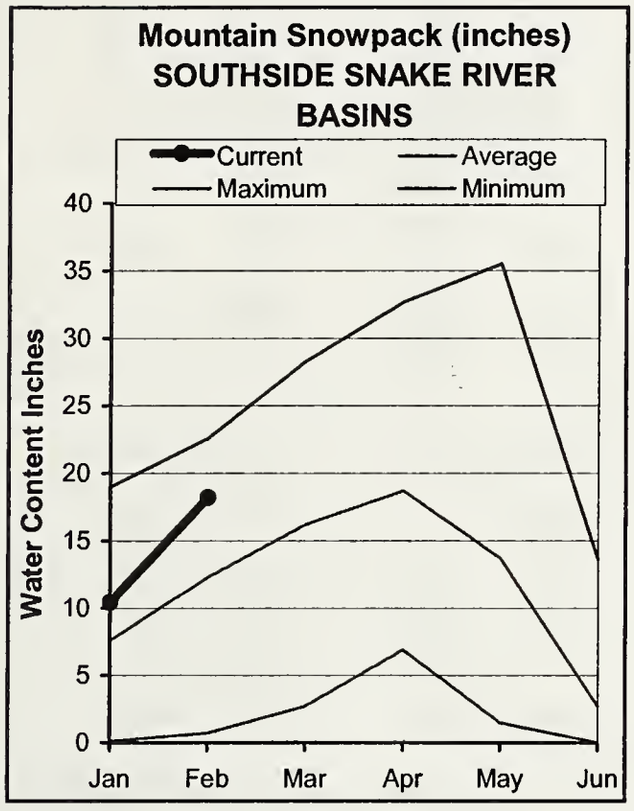
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Henrys Fork-Falls River	10	161	134
Teton River	8	183	130
Henrys Fork above Rexburg	18	169	132
Snake above Jackson Lake	9	185	128
Gros Ventre River	3	157	108
Hoback River	5	150	112
Greys River	5	165	128
Salt River	5	162	124
Snake above Palisades	28	171	124
Willow Creek	7	188	146
Blackfoot River	4	182	131
Portneuf River	6	144	140
Snake abv American Falls	47	167	130

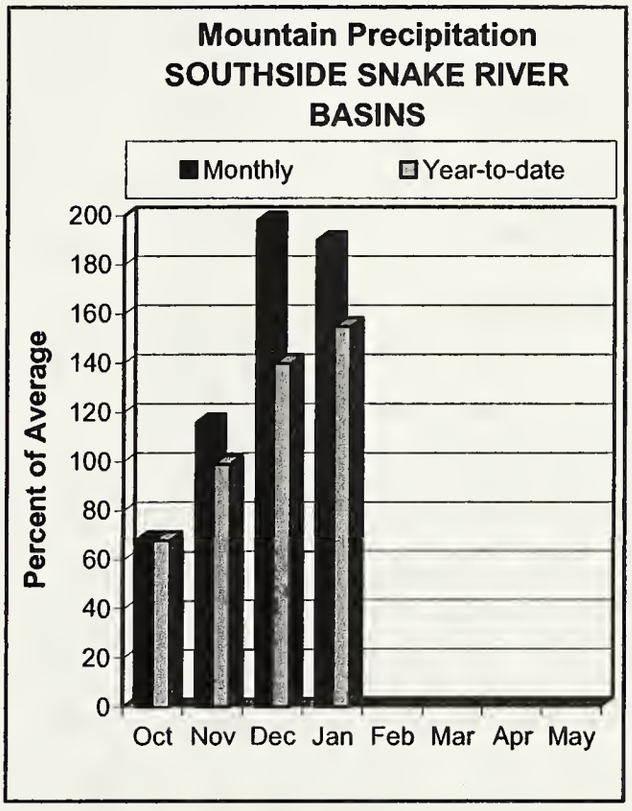
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

SOUTHSIDE SNAKE RIVER BASINS FEBRUARY 1, 2006





WATER SUPPLY OUTLOOK

Precipitation in January continued where December left off as each month saw nearly twice the average amount. On February 1, Mud Flat SNOTEL site recorded 14.1 inches of precipitation for the water year setting a new record for the date based on 25 years of daily data. Cold storms in January stored much of this water in the snowpack, which ranges from 135% of average in the Owyhee basin to 160% in the Oakley basin. Snow depths in the high desert range from no snow in the lower elevations to 90 inches at Howell Canyon SNOTEL in Cassia County. Most of the sagebrush in the low elevation Owyhee Basin is covered with 35-45 inches of snow. Fascinating snow drift patterns were observed when the Owyhee aerial marker flight was made in late January as the airplane skimmed above the windswept, snow covered plateau. This much snow equates to around 10.5 inches of water and has caused the Owyhee Reservoir managers to increase outflow to over 2,000 cfs to maintain flood storage capacity. The Owyhee Reservoir is 83% full and forecast at 134% of average. Snowpacks in the higher elevation basins of Oakley, Salmon Falls and Bruneau are near their normal seasonal peaks having increased to 140-160% of average for February 1. Salmon Falls Reservoir is 23% full, 76% of average and forecast at 145% of average. Oakley Reservoir is 40% full, 109% of average and forecast at 132% of average. Bruneau River is forecast at 132% of average. With more water in the reservoirs and snowpacks at or near their April 1 seasonal peaks, water supplies and river running opportunities should be adequate even with below normal precipitation the rest of winter.

SOUTHSIDE SNAKE RIVER BASINS
Streamflow Forecasts - February 1, 2006

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
OAKLEY RESERVOIR INFLOW	MAR-JUL	30	39	45	132	52	63	34
	MAR-SEP	33	42	49	132	56	68	37
SALMON FALLS CREEK nr San Jacinto	MAR-JUN	102	118	129	145	140	156	89
	MAR-JUL	106	123	135	145	147	164	93
	MAR-SEP	113	130	142	145	154	171	98
BRUNEAU near Hot Spring	MAR-JUL	218	271	310	132	352	418	235
	MAR-SEP	234	289	330	132	374	443	250
OWYHEE near Gold Creek (2)	MAR-JUL	46	46	47	147	48	49	32
	MAR-SEP	46	47	48	155	49	50	31
OWYHEE nr Owyhee (2)	APR-JUL	71	98	116	142	134	161	82
OWYHEE near Rome	FEB-JUL	557	738	875	134	1024	1264	655
	FEB-SEP	581	765	905	134	1057	1301	675
OWYHEE RESV INFLOW (2)	FEB-JUL	602	792	935	134	1090	1340	700
	FEB-SEP	637	829	975	134	1132	1385	730
	APR-SEP	341	473	575	134	687	869	430
SUCCOR CK nr Jordan Valley	FEB-JUL	16.1	23	28	145	33	40	19.3
SNAKE RIVER at King Hill (1,2)	APR-JUL	1637	2451	2820	96	3190	4000	2940
SNAKE RIVER near Murphy (1,2)	APR-JUL	1775	2631	3020	98	3410	4270	3090
Reynolds Creek nr Tollgate	MAR-JUL	9.0	11.7	13.7	141	15.9	19.4	9.7
SNAKE RIVER at Weiser (1,2)	APR-JUL	4274	6231	7120	123	8010	9970	5770
SNAKE RIVER at Hells Canyon Dam (1,2	APR-JUL	5210	7307	8260	127	9215	11310	6490
SNAKE blw Lower Granite Dam (1,2)	APR-JUL	15485	21891	24800	115	27710	34110	21600

SOUTHSIDE SNAKE RIVER BASINS
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
OAKLEY	75.6	30.6	12.1	28.2
SALMON FALLS	182.6	42.4	17.6	55.7
WILDHORSE RESERVOIR	71.5	40.5	14.0	38.9
OWYHEE	715.0	594.0	173.3	438.3
BROWNLEE	1420.0	1192.4	1314.3	1176.3

SOUTHSIDE SNAKE RIVER BASINS
Watershed Snowpack Analysis - February 1, 2006

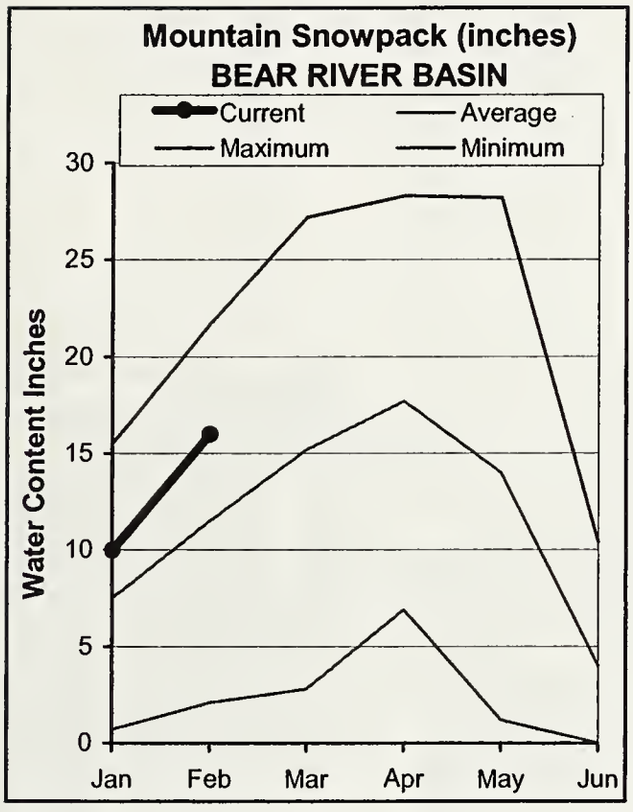
Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Raft River	2	223	175
Goose-Trapper Creeks	3	191	160
Salmon Falls Creek	7	166	148
Bruneau River	8	185	153
Reynolds Creek	6	207	139
Owyhee Basin Total	19	218	135

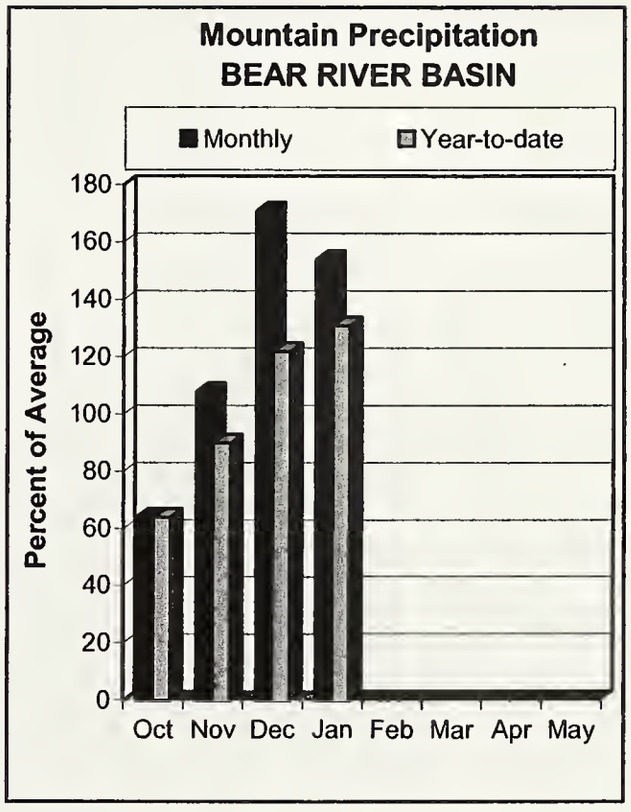
* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

BEAR RIVER BASIN
FEBRUARY 1, 2006





WATER SUPPLY OUTLOOK

Strong precipitation in December followed by 154% average for January increased water year to date precipitation to 131% of average. Snowpacks range from 128% of average for Montpelier Creek to 160% for the Cub River. Overall, the Bear River snowpack is 135% of average, the highest amount since 1997, and stands at 83% of the normal seasonal peak. Storage in Bear Lake is 394,000 acre-feet or 28% of capacity, this amount is more than three-times the storage of a year ago, but still only 44% of average. This provides a good illustration of how the effects of drought can persist even when the basin is experiencing its second consecutive wet winter. Montpelier Reservoir is 75% full, 176% of average. Streamflows are looking encouraging at this time and are forecast at 120-135% of average for the April-September period. Hopefully the final months of winter will continue to bring above average precipitation, increasing the level of Bear Lake closer to average one these years.

BEAR RIVER BASIN
Streamflow Forecasts - February 1, 2006

Forecast Point	Forecast Period	<<====== Drier ====== Future Conditions ======= Wetter =====>> Chance Of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
Bear River nr UT-WY State Line	APR-JUL	101	121	135	120	149	169	113
	APR-SEP	110	133	149	119	165	188	125
Bear River ab Reservoir nr Woodruff	APR-JUL	115	147	169	124	191	223	136
	APR-SEP	121	154	177	125	200	231	142
Big Creek nr Randolph	APR-JUL	5.2	6.3	7.1	145	7.9	9.0	4.9
Smiths Fork nr Border	APR-JUL	111	129	141	137	153	171	103
	APR-SEP	128	148	162	134	176	196	121
Bear River at Stewart Dam	APR-JUL	208	269	315	135	365	445	234
	APR-SEP	237	304	355	136	410	497	262
Little Bear River at Paradise	APR-JUL	35	48	58	126	69	86	46
Logan R Abv State Dam Nr Logan	APR-JUL	126	154	175	139	197	233	126
Blacksmith Fk Abv Up&L Dam Nr Hyrum	APR-JUL	44	58	69	144	81	100	48

BEAR RIVER BASIN
Reservoir Storage (1000 AF) - End of January

Reservoir	Usable Capacity	*** Usable Storage *** This Year	Last Year	Avg
BEAR LAKE	1421.0	394.8	122.1	906.1
MONTPELIER CREEK	4.0	3.0	1.6	1.7

BEAR RIVER BASIN
Watershed Snowpack Analysis - February 1, 2006

Watershed	Number of Data Sites	This Year as % of Last Yr	Average
Smiths & Thomas Forks	4	135	132
Bear River ab WY-ID line	11	120	132
Montpelier Creek	2	133	130
Mink Creek	1	154	139
Cub River	1	148	160
Bear River ab ID-UT line	18	128	135
Malad River	1	151	153

* 90%, 70%, 50%, 30%, and 10% chances of exceeding are the probabilities that the actual volume will exceed the volumes in the table.

The average is computed for the 1971-2000 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural volume - actual volume may be affected by upstream water management.

Streamflow Adjustment List for All Forecasts Published in Idaho Water Supply Outlook Report: streamflow forecasts are projections of runoff volumes that would occur without influences from upstream reservoirs or diversions. These values are referred to as natural, unregulated or adjusted flows. To make these adjustments, changes in reservoir storage, diversions, and inter-basin transfers are added or subtracted from the observed (actual) streamflow volumes. The following list documents the adjustments made for each forecast point. **(Revised Dec. 2005).**

Panhandle River Basins

Kootenai R at Leonia, ID
+ Lake Koocanusa (Storage Change)
Boundary Ck nr Porthill, ID – No Corrections
Moyie R at Eastport, ID – No Corrections
Smith Creek nr Porthill, ID – No Corrections
Clark Fork R at Whitehorse Rapids, ID
+ Hungry Horse (Storage Change)
+ Flathead Lake (Storage Change)
+ Noxon Rapids Resv (Storage Change)
Pend Oreille Lake Inflow, ID
+ Pend Oreille R at Newport, WA
+ Hungry Horse (Storage Change)
+ Flathead Lake (Storage Change)
+ Noxon Rapids (Storage Change
+ Pend Oreille Lake (Storage Change)
+ Priest Lake (Storage Change)
Priest R nr Priest R, ID
+ Priest Lake (Storage Change)
NF Coeur d'Alene R at Enaville, ID - No Corrections
St. Joe R at Calder, ID - No Corrections
Spokane R nr Post Falls, ID
+ Coeur d'Alene Lake (Storage Change)
Spokane R at Long Lake, WA
+ Coeur d'Alene Lake (Storage Change)
+ Long Lake, WA (Storage Change)

Clearwater River Basin

Selway R nr Lowell - No Corrections
Lochsa R nr Lowell - No Corrections
Dworshak Resv Inflow, ID
+ Clearwater R nr Peck, ID
- Clearwater R at Orofino, ID
+ Dworshak Resv (Storage Change)
Clearwater R at Orofino, ID - No Corrections
Clearwater R at Spalding, ID
+ Dworshak Resv (Storage Change)

Salmon River Basin

Salmon R at Salmon, ID - No Corrections
Lemhi R nr Lemhi, ID – No Corrections
MF Salmon R at MF Lodge, ID – No Corrections
Salmon R at White Bird, ID - No Corrections

Weiser, Payette, Boise River Basins

Weiser R nr Weiser, ID - No Corrections
SF Payette R at Lowman, ID - No Corrections
Deadwood Resv Inflow, ID
+ Deadwood R blw Deadwood Resv nr Lowman
+ Deadwood Resv (Storage Change)
Lake Fork Payette R nr Mccall, ID – No Corrections
NF Payette R at Cascade, ID
+ Cascade Resv (Storage Change)
+ Payette Lake (Storage Change)
NF Payette R nr Banks, ID
+ Cascade Resv (Storage Change)
+ Payette Lake (Storage Change)
Payette R nr Horseshoe Bend, ID
+ Cascade Resv (Storage Change)
+ Deadwood Resv (Storage Change)
+ Payette Lake (Storage Change)
Boise R nr Twin Springs, ID - No Corrections
SF Boise R at Anderson Ranch Dam, ID
+ Anderson Ranch Resv (Storage Change)
Boise R nr Boise, ID
+ Anderson Ranch Resv (Storage Change)
+ Arrowrock Resv (Storage Change)
+ Lucky Peak Resv (Storage Change)

Wood and Lost River Basins

Big Wood R at Hailey, ID - No Corrections
Big Wood R abv Magic Resv, ID
+ Big Wood R nr Bellevue, ID
+ Willow Ck
Camas Ck nr Blaine – No Corrections
Big Wood R blw Magic Dam nr Richfield, ID
+ Magic Resv (Storage Change)
Little Wood R abv High Five Ck, ID – No Corrections
Little Wood R nr Carey, ID
+ Little Wood Resv (Storage Change)
Big Lost R at Howell Ranch, ID - No Corrections
Big Lost R blw Mackay Resv nr Mackay, ID
+ Mackay Resv (Storage Change)
Little Lost R blw Wet Ck nr Howe, ID - No Corrections

Upper Snake River Basin

Henrys Fork nr Ashton, ID
+ Henrys Lake (Storage Change)
+ Island Park Resv (Storage Change)
Henrys Fork nr Rexburg, ID
+ Henrys Lake (Storage Change)
+ Island Park Resv (Storage Change)
+ Grassy Lake (Storage Change)
+ Diversions from Henrys Fk btw Ashton to St. Anthony, ID
+ Diversions from Henrys Fk btw St. Anthony to Rexburg, ID
+ Diversions from Falls R abv nr Ashton, ID
+ Diversions from Falls R nr Ashton to Chester, ID
Falls R nr Ashton, ID
+ Grassy Lake (Storage Change)
+ Diversions from Falls R abv nr Ashton, ID
Teton R nr Driggs, ID - No Corrections
Teton R nr St. Anthony, ID
- Cross Cut Canal into Teton R
+ Sum of Diversions for Teton R abv St. Anthony, ID
Snake R nr Moran, WY
+ Jackson Lake (Storage Change)
Pacific Ck at Moran, WY – No Corrections

Snake R abv Palisades, WY
+ Jackson Lake (Storage Change)
Greys R abv Palisades, WY – No Corrections
Salt R abv Palisades, WY – No Corrections
Snake R nr Irwin, ID
+ Jackson Lake (Storage Change)
+ Palisades Resv (Storage Change)
Snake R nr Heise, ID
+ Jackson Lake (Storage Change)
+ Palisades Resv (Storage Change)
Willow Ck nr Ririe, ID
+ Ririe Resv (Storage Change)
Blackfoot Resvervoir Inflow, ID
+ Blackfoot Reservoir releases
+ Blackfoot Resv (Storage Change
Snake R nr Blackfoot, ID
+ Palisades Resv (Storage Change)
+ Jackson Lake (Storage Change)
+ Diversions from Snake R btw Heise and Shelly
+ Diversions from Snake R btw Shelly and Blackfoot
Portneuf R at Topaz, ID - No Corrections
American Falls Resv Inflow, ID
+ Snake River at Neeley
+ All Corrections made for Henrys Fk nr Rexburg, ID
+ Jackson Lake (Storage Change)
+ Palisades Resv (Storage Change)
+ Diversions from Snake R btw Heise and Shelly
+ Diversions from Snake R btw Shelly and Blackfoot

Southside Snake River Basins
Oakley Resv Inflow, ID
+ Goose Ck abv Trapper Ck
+ Trapper Ck nr Oakley
Salmon Falls Ck nr San Jacinto, NV - No Corrections
Bruneau R nr Hot Springs, ID - No Corrections
Owyhee R nr Gold Ck, NV
+ Wildhorse Resv (Storage Change)
Owyhee R nr Owyhee, NV
+ Wildhorse Resv (Storage Change)
Owyhee R nr Rome, OR – No Corrections
Owyhee Resv Inflow, OR
+ Owyhee R blw Owyhee Dam, OR
+ Owyhee Resv (Storage Change)
+ Diversions to North and South Canals
Succor Ck nr Jordan Valley, OR - No Corrections
Snake R at King Hill, ID - No Corrections
Snake R nr Murphy, ID - No Corrections
Snake R at Weiser, ID - No Corrections
Snake R at Hells Canyon Dam, ID
+ Brownlee Resv (Storage Change)

Bear River Basin
Bear R nr UT-WY Stateline, UT – No Corrections
Bear R abv Resv nr Woodruff, UT – No Corrections
Smiths Fork nr Border, WY - No Corrections
Bear R blw Stewart Dam nr Montpelier, ID
+ Bear R blw Stewart Dam
+ Rainbow Inlet Canal

Reservoir Capacity Definitions (Units in 1,000 Acre-Feet, KAF)
Different agencies use various definitions when reporting reservoir capacity and contents. Reservoir storage terms include dead, inactive, active, and surcharge storage. This table lists these volumes for each reservoir, and defines the storage volumes NRCS uses when reporting capacity and current reservoir storage. In most cases, NRCS reports usable storage, which includes active and inactive storage. **(Revised Dec. 2005)**

Basin/ Reservoir	Dead Storage	Inactive Storage	Active Storage	Surcharge Storage	NRCS Capacity	NRCS Capacity Includes
Panhandle Region						
Hungry Horse	39.73	--	3451.00	--	3451.0	Active
Flathead Lake	Unknown	--	1791.00	--	1791.0	Active
Noxon Rapids	Unknown	--	335.00	--	335.0	Active
Pend Oreille	406.20	112.40	1042.70	--	1561.3	Dead+Inactive+Active
Coeur d'Alene	--	13.50	225.00	--	238.5	Inactive+Active
Priest Lake	20.00	28.00	71.30	--	119.3	Dead+Inactive+Active
Clearwater Basin						
Dworshak	--	1452.00	2016.00	--	3468.0	Inactive+Active
Weiser/Boise/Payette Basins						
Mann Creek	1.61	0.24	11.10	--	11.1	Active
Cascade	--	46.70	646.50	--	693.2	Inactive+Active
Deadwood	--	--	161.90	--	161.9	Active
Anderson Ranch	24.90	37.00	413.10	--	450.1	Inactive+Active
Arrowrock	--	--	272.20	--	272.2	Active
Lucky Peak	--	28.80	264.40	13.80	293.2	Inactive+Active
Lake Lowell	7.90	5.80	159.40	--	165.2	Inactive+Active
Wood/Lost Basins						
Magic	Unknown	--	191.50	--	191.5	Active
Little Wood	--	--	30.00	--	30.0	Active
Mackay	0.13	--	44.37	--	44.4	Active
Upper Snake Basin						
Henrys Lake	--	--	90.40	--	90.4	Active
Island Park	0.40	--	127.30	7.90	135.2	Active+Surcharge
Grassy Lake	--	--	15.18	--	15.2	Active
Jackson Lake	Unknown	--	847.00	--	847.0	Active
Palisades	44.10	155.50	1200.00	--	1400.0	Dead+Inactive+Active
Ririe	4.00	6.00	80.54	10.00	80.5	Active
Blackfoot	--	--	348.73	--	348.7	Active
American Falls	--	--	1672.60	--	1672.6	Active
Southside Snake Basins						
Oakley	0	--	75.60	--	75.6	Active
Salmon Falls	48.00	5.0	182.65	--	182.6	Active+Inactive
Wildhorse	--	--	71.50	--	71.5	Active
Owyhee	406.83	--	715.00	--	715.0	Active
Brownlee	0.45	444.70	975.30	--	1420.0	Inactive+Active
Bear River Basin						
Bear Lake	5.0MAF	119.0	1302.00	--	1421.0	Active+Inactive: includes 119 that can be released
Montpelier Creek	0.21	--	3.84	--	4.0	Dead+Active

Interpreting Water Supply Forecasts

Introduction
Each month, five forecasts are issued for each forecast point and each forecast period. Unless otherwise specified, all streamflow forecasts are for streamflow volumes that would occur naturally without any upstream influences. Water users need to know what the different forecasts represent if they are to use the information correctly when making operational decisions. The following is an explanation of each of the forecasts.

90 Percent Chance of Exceedance Forecast. There is a 90 percent chance that the actual streamflow volume will exceed this forecast value, and there is a 10 percent chance that the actual streamflow volume will be less than this forecast value.

70 Percent Chance of Exceedance Forecast. There is a 70 percent chance that the actual streamflow volume will exceed this forecast value, and there is a 30 percent chance that the actual streamflow volume will be less than this forecast value.

50 Percent Chance of Exceedance Forecast. There is a 50 percent chance that the actual streamflow volume will exceed this forecast value, and there is a 50 percent chance that the actual streamflow volume will be less than this forecast value. Generally, this forecast is the middle of the range of possible streamflow volumes that can be produced given current conditions.

30 Percent Chance of Exceedance Forecast. There is a 30 percent chance that the actual streamflow volume will exceed this forecast value, and there is a 70 percent chance that the actual streamflow volume will be less than this forecast value.

10 Percent Chance of Exceedance Forecast. There is a 10 percent chance that the actual streamflow volume will exceed this forecast value, and there is a 90 percent chance that the actual streamflow volume will be less than this forecast value.

*Note: There is still a 20 percent chance that actual streamflow volumes will fall either below the 90 percent exceedance forecast or above the 10 percent exceedance forecast.

These forecasts represent the uncertainty inherent in making streamflow predictions. This uncertainty may include sources such as: unknown future weather conditions, uncertainties associated with the various prediction methodologies, and the spatial coverage of the data network in a given basin.

30-Year Average. The 30-year average streamflow for each forecast period is provided for comparison. The average is based on data from 1971-2000. The % AVG. column compares the 50% chance of exceedance forecast to the 30-year average streamflow; values above 100% denote when the 50% chance of exceedance forecast would be greater than the 30-year average streamflow.

AF - Acre-feet, forecasted volume of water are typically in thousands of acre-feet.

These forecasts are given to users to help make risk-based decisions. Users can select the forecast corresponding to the level of risk they are willing to accept in order to minimize the negative impacts of having more or less water than planned for.

To Decrease the Chance of Having Less Water than Planned for
A user might determine that making decisions based on a 50 percent chance of exceedance forecast is too much risk to take (there is still a 50% chance that the user will receive less than this amount). To reduce the risk of .having less water than planned for, users can base their operational decisions on one of the forecasts with a greater chance of being exceeded such as the 90 or 70 percent exceedance forecasts.

To Decrease the Chance of Having More Water than Planned for
A user might determine that making decisions based on a 50 percent chance of exceedance forecast is too much risk to take (there is still a 50% chance that the user will receive more than this amount). To reduce the risk of having more water than planned for, users can base their operational decisions on one of the forecasts with a lesser chance of being exceeded such as the 30 or 10 percent exceedance forecasts.

Using the forecasts - an Example
Using the 50 Percent Exceedance Forecast. Using the example forecasts shown below, there is a 50% chance that actual streamflow volume at the Boise River near Twin Springs will be less than 685 KAF between April 1 and July 31. There is also a 50% chance that actual streamflow volume will be greater than 685 KAF.

Using the 90 and 70 Percent Exceedance Forecasts. If an unexpected shortage of water could cause problems (such as irrigated agriculture), users might want to plan on receiving 610 KAF (from the 70 percent exceedance forecast). There is a 30% chance of receiving *less* than 610 KAF.

Alternatively, if users determine the risk of using the 70 percent exceedance forecast is too great, then they might plan on receiving 443 KAF (from the 90 percent exceedance forecast). There is 10% chance of receiving less than 443 KAF.

Using the 30 or 10 Percent Exceedance Forecasts. If an unexpected excess of water could cause problems (such as operating a flood control reservoir), users might plan on receiving 760 KAF (from the 30 percent exceedance forecast). There is a 30% chance of receiving *more* than 760 KAF.

Alternatively, if users determine the risk of using the 30 percent exceedance forecast is too great, then they might plan on receiving 927 KAF (from the 10 percent exceedance forecast). There is a 10% chance of receiving more than 927 KAF.

Users could also choose a volume in between any of these values to reflect their desired risk level.

Weiser, Payette, Boise River Basins
Streamflow Forecasts – January 2016

Forecast Point	Forecast Period	Chance of Exceeding * 90% (1000AF)	70% (1000AF)	50% (1000 AF)	50% (% AVG.)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)
SF PAYETTE RIVER at Lowman	APR-JUL	329	414	471	109	528	613	432
	APR-SEP	369	459	521	107	583	673	488
BOISE RIVER near Twin Springs (1)	APR-JUL	443	610	685	109	760	927	631
	APR-SEP	495	670	750	109	830	1005	690

*90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table

USDA Natural Resources Conservation Service
9173 West Barnes Drive, Suite C
Boise ID 83709-1574

OFFICIAL BUSINESS

Issued by
Bruce I. Knight, Chief
Natural Resources Conservation Service
Washington, DC

Released by
Richard Sims, State Conservationist
Natural Resources Conservation Service
Boise, Idaho

Prepared by
Snow Survey Staff
Ron Abramovich, Water Supply Specialist
Philip Morrisey, Data Collection Officer
Jeff Anderson, Hydrologist
John Wirt, Hydrologic Technician
Jeff Graham, Electronics Technician
Chad Gibson, Electronics Technician

Assistance provided by
Tom Perkins, Senior Forecast Hydrologist,
NRCS, National Water and Climate Center, Portland, Oregon

Cooperative funding for printing provided by
Idaho Department of Water Resources

Numerous other agencies provide funding and/or
cooperative support for the collection, operation
and maintenance of the Snow Survey Program.
Their cooperation is greatly appreciated.